

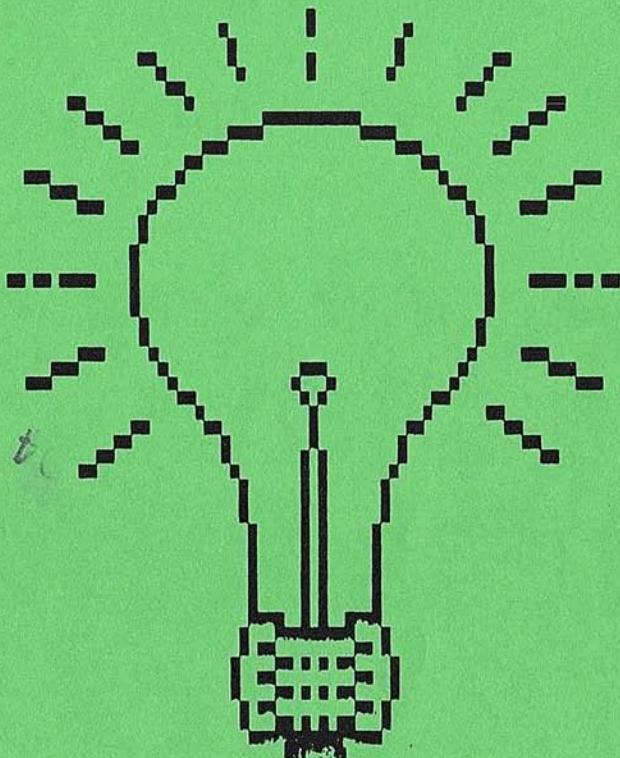


# ATARI COMPUTER CLUB OF OKC INC.

P. O. BOX 32672  
OKLAHOMA CITY, OK. 73123  
NEWSLETTER VOL. #VIII ISSUE # 1



# BRING YOUR



# IDEA'S !!!

## MEETING AT OKLA. MILITARY DEPT.

3501 MILITARY CIRCLE AT (36TH & GRAND)

MEETING TIME: 6:15 TO 9:00 PM

MEETING DATE: AUGUST 11TH, 1987



## PRESIDENTIAL NOTES

By Bob Bewley

First of all, I'd like to say that I was as surprised as you at the last meeting. I had no idea that we would be having such a FREE FORM meeting! I would also like to assure you that the same thing will NOT happen this month. Second, I'd like to THANK everyone who joined the club last month. This year should be even better than the last. I am honored to be your President for another year. It seems like I was just getting warmed up last year when all of a sudden the year was over. Hopefully we can have many INFORMAL meetings where we simply get together and show off our favorite software, hardware or special projects. In fact, that's exactly what's going to happen this month.

Gerald Burton came prepared to demo STARFLEET ONE last month, but we seemed to be short of electricity. Gerald said that he would be back this month to demo this GREAT game. Sharon Jasper will be showing a new piece of software called AWARDWARE. She says it makes GREAT Certificates and Awards. John Brandt will be showing off his INDUS GT Disk Drive complete with the RAMCHARGER (including CP/M), and finally, as I promised last month, I will be showing the Happy Enhancement for the ATARI 1050 along with the new version 7.1 software.

If anyone has anything that they want to show off or talk about at the meeting, PLEASE feel free to speak up, after all, this is YOUR club and everyone is welcome to participate in ALL activities. Even if you're too shy to demo the software, you can write a review about it or even just a short article with some hints on how to play it or the strategy you use to win. Just bring the articles to the meeting and give them to George Morse and I'm sure he can find some room in the next newsletter for them.

Speaking of newsletters, I have been reading the newsletters that we receive from other clubs across the nation and I will be sharing some of their thoughts with you in future newsletters. I was interested in the last TACE newsletter in which the new President, Michael Beard stated in his article that one of his goals this year was to have a

k( of merger between our two clubs as far as producing a single newsletter for both clubs. As of the writing of this article NO ONE from the TACE club has contacted me with information or details as to how this may be accomplished. This may also be a subject which we can discuss at the next meeting (if time permits).

One final note before I close this article for another month, I know we didn't have any door prizes last month, but then again WE DIDN'T HAVE ANY DOORS! This month we will have some door prizes.

See you at the meeting.

## LIBRARIAN'S CORNER

By Fred Jones

Well I VOLUNTEERED for it and I will try to do a good job for the club. The first month on my new "JOB" was a LULU. I wo--" during the day and sometimes the night, for the UNISYS Computer Corp. (It used to be the Burroughs Corp.), and as luck would have it I was sent out of town and out of the state for most of my first month of office. The only thing that saved my hide in July was the fact that Tom Holden had already made up the Disk of the Month. All I had to do was copy it for sale to the club at the meeting. In spite of the "inclement" meeting conditions, you good club members turned out for the July meeting in good humor and bought a lot of the disks. HOORAY FOR YOU!! All of the money goes into the club treasury to help us be the BEST Atari group in the city.

The August D.O.M. will have some copy utilities on it and (for those who don't have it) D:CHECK2 from the Analog magazine so you can type and check the programs from the early issues of Analog. Also some games and other, I hope, good programs.

BONDS, BILLS, AND NOTES FROM THE TREASURY  
By Richard Rhea

When I received the July newsletter, I had no idea that its cover page would have so much meaning for me! I was so looking forward to the July 14th club meeting, but Nature had made other plans for me to "Start the Year with a Bang"! I had to hurriedly call Bob Bewley to help cover for me as Treasurer that evening while my wife and I went to the hospital to welcome our third child, Amanda LeaAnn, to the world at 8:42 PM. Amanda weighed 7 1/2 pounds and was 20 inches tall. Even though it was our third, It was still a wild and wonderful experience!

The Treasurer's report reflects a healthy balance and cash flow position this month as a result of only having debts relating to the newsletter and credits resulting from Disk-of-the-Month Sales and membership renewals. I anticipate continued renewals next month and increased Disk-of-the-Month sales and urge all members to help in increasing our membership roll by seeking out your friends and neighbors, who either are or would like to become an atari Computer user, and bring them to the club meetings.

Remember to support your club at the club meetings by purchasing the Disk-of-the-Month and/or Disk-of-the-Month Coupons, blank disks and the updated Library Listing. Also, don't forget to bring and wear your name tag. Bring your ideas and suggestions, and I'll see you at the meeting!!

TREASURER'S REPORT  
JULY 1987  
By Richard Rhea

BEGINNING BALANCE\*\*\*\*\*>>> \$366.19

DEBITS	\$ 62.28
Printing	\$ 40.28
Mailing	\$ 22.00

CREDITS	\$216.00
Dues	\$180.00
DOM	\$ 36.00

ENDING BALANCE\*\*\*\*\*>>> \$519.91

## EDITOR'S CORNER

By George Morse

Here we are again, another month has come and gone. The summer months sure do seem to pass by us so quickly. I'm sure most of you have been enjoying this nice weather we have been having, but let us not forget our machines. After all you can only have so much fun in the sun doing those summer time chores, like mowing the lawn, trimming trees, etc. etc..

As you can see we have a super meeting lined up for August. This would be a great time for everyone to bring a prospective member to the meeting to see what we have to offer. Be sure to bring your ideas to the meeting too, we want to know what you would like to do and see in our club.

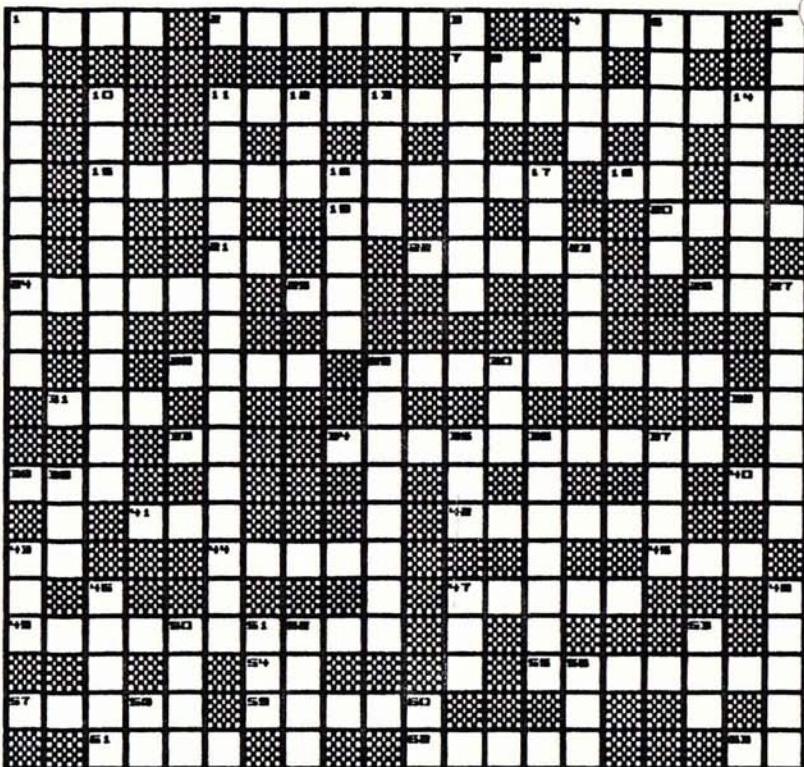
This months newsletter has part 2 of John Brandt's article on Copy Protection, as well as a review on the Percom Upgrade ROM by John. A new item is the crossword puzzle submitted by Tom Holden. The answers to this puzzle will be in next months newsletter along with a new puzzle. If you have ideas for publication in the newsletter, submit them to me at the meetings. Also if any of you have some Print Shop creations of your own that would be appropriate for our newsletter cover your welcome to pass them along to me. Be sure to do so at the meeting previous to the issue it is for.

SEE YOU AT THE MEETING!!

## BARGAINS OF THE MONTH!!

TARGET'S near Quail Springs Mall still has plenty of disk notchers on clearance for \$2.00. For those of you that don't make it out that way, I've picked up a couple extras. See me at the meeting.

KOSOL'S at N.W. 19th & Portland has real good prices on most all major brands of SS/DD & DS/DD disk. Starting at \$7.20/bx. Also if you use a lot of printer labels, check this out, a box of 5000 for \$13.90. THAT'S CORRECT!!!



## ACROSS CLUES

- Small AURA of light
  - Colloidal suspension of Graphite in water
  - Protective device
  - Tomato
  - An after glow
  - Light emission during excitation only
  - HIT off to work I go
  - Home State
  - Sign
  - This that
  - Electromagnetic switch
  - Radio noise
  - Greek letter  $\pi$
  - Greek letter T
  - White spots on TV
  - DC to AC
  - Dug (game)
  - Greek letter N
  - Greek letter M
  - Displaced 90 degrees in phase angle
  - 2000 pounds
  - Not you but
  - Occupy a seat
  - Absorbs remaining gasses in a vacuum tube
  - 12 and 2
  - Nickel-steel resistance wire
  - Seeing dog
  - Tone determined by Frequency
  - Iconoscope memory tube
  - $\text{HO-HO}$
  - One Amp per second
  - Electromagnetic unit
  - Optical counterpart
  - for the NEWS
  - Frequency Meter
  - Not off

**DOWN CLUES**

- Magnetic lag
  - Connected to Earth
  - Command in basic XL
  - MHD
  - Where \_\_\_ you
  - Offers a choice
  - Maine
  - Bending of light waves
  - Resistance change due to light
  - Rock
  - Choose
  - Embraces HUE and COLOR saturation
  - Pertaining to sound waves
  - Estimated time of arrival
  - Up and down
  - Not Resonant at this Frequency
  - One Proton and one Neutron
  - Thin as \_\_\_
  - DIG-
  - Non-directional
  - Not common
  - Globe
  - Delay
  - Unbalanced to balanced matching device
  - Greek Letter Φ
  - Unit of absorption in Acoustics
  - Snake sound
  - Greek letter X
  - To be guided toward a destination
  - Sound distortion due to speed variation
  - Resistance
  - no
  - Electronic Force

## EDITORIAL

### Copy Protectionism, Part 2 by John Brandt

Last month I editorialized on Lotus's use of lawsuits to harass its competition in the IBM spreadsheet market, a practice I called "copy protectionism". This month, though, I want to look at a form of copy protectionism that is technological rather than legal in nature.

This is it: Intel has announced a new version of a popular ROM (Read-Only Memory) chip, called the KEPROM (Keyed Programmable ROM). It is basically a programmable ROM with a lock-and-key feature added. When a KEPROM is initially programmed, it is assigned a numerical key. From then on, when power is applied to the KEPROM, it is "locked" and unreadable except for a 512-byte initialization routine. To unlock the KEPROM, the initialization routine must carry out a sequence of operations which will "convince" the KEPROM that the computer knows its key. This is usually done by using another KEPROM with the same key, and is accomplished in such a way that the initialization routine runs "blind," so to speak, and never deals directly with the key itself. Thus, it is (theoretically) impossible to write a "trojan horse" routine which determines the key while unlocking the KROMs.

OK, but so what? What good is it? Well, perhaps the most obvious way to use it would be to make a cartridge with two matched KEPROMs. The software could even be designed to lock the KEPROMs back up if it detected something amiss (such as OMNIMON! being switched in). At first glance, this would seem to make the cartridge copy-proof.

A little thought, however, reveals that such a cartridge would not really be secure. A potential pirate could still copy the cartridge by first copying the (unprotected) initialization routine, then modifying it to dump the data from the KEPROMs to disk after it carried out the authorization sequence. Thus, the chip isn't really much of a threat to pirates, at least on current computer systems.

OK, then, how COULD a KEPROM-based cartridge be made secure? Well, suppose a computer's OS were "locked" into a KEPROM. Then, a matching cartridge would be required to make the computer work at all! Since such a machine would only work when the inserted cartridge contained a matching key,

your cartridges would only work on your machine and nob else's. Backups would be impossible (though theoretically unnecessary because cartridges aren't susceptible to the same kinds of mishaps as diskettes). Even an EPROM burner wouldn't help without knowledge of the KEPROM's key. This, of course, deters piracy. But it also deters the owner of such a machine from upgrading to a bigger, better one, which probably explains why no computer manufacturer has done this yet. However, computer manufacturers could still KEPROM their machines by mounting the KEPROMs on a separate board, or otherwise designing them to be easily removed from one machine and installed in another.

What would it take to copy a cartridge on such a system? Well, I suppose it would be possible to either load a short program or install a simple device (a la the "Impossible!" chip) which would allow the KEPROMmed OS and cartridge to unlock each other, then dump both out to disk. If the software were relocatable, it could then be run from disk under control of some "generic" cartridge such as BASIC. More likely, however, the OS would have to be burned into ordinary EPROMs, and a special RAM-based cartridge used to load "broken" programs. The original KEPROMmed OS would be kept to unlock future software, with the EPROM version used to run broken cartridges. So piracy would still be possible, but, like Happy Rev. 7, both the "pirate-or" and the "pirate-ee" would have to have the same hardware to make usable copies. Since any supplier of this hardware could supply the OS in EPROM without risking piracy charges itself, it would have to supply an EPROM burner with the rest of the hardware. Thus, such a system should be sufficiently expensive that piracy would still be deterred.

So what's wrong with any of this? Surely there's no overpowering need to back up one's cartridges! After all, how many cartridges have you ruined?

The problem is the control computer and software vendors would get over what programs you purchased and who you purchased them from, if this type of system were in wide use. You see, you obviously couldn't buy software "off the shelf" at Merit Computers, Computers Unlimited, or wherever. Instead, you or the store would have to send an ORDER for software to the manufacturer, so they could make you a custom KEPROM with your computer's key. Stores might like it; no inventory. But if you found that it wasn't what you wanted, well, "this software is distributed AS-IS without warranty of any kind, express or implied...." In other words, too bad, so

they've got your money, and you've been had.

Also, if you think you'll know your computer's key so you can just give it to Locust 6&7/8ths or whoever, think again. Knowing your own key would defeat the purpose. You could unlock any software you ordered, then burn it into another KEPROM for someone else's computer (since he can give you his key too). So instead, you'll have to give Locust your computer's serial number, so they can look up your key on a master computer file. (If any of you are familiar with the VideoCipher scrambling system for satellite TV, this should give you a real sense of *deja vu*.) (Wish I had a 102x printer so I could print those "international" characters in *deja vu*.) That master file will probably be controlled by your computer manufacturer. (Let's say for the sake of argument that you buy a KEPROM-based computer from a purely hypothetical company called ICBM.) That means:

- (1) The "Big Brother" aspect: ICBM will have a record of exactly what software you have purchased for your computer and when you purchased it.
- (2) ICBM can control who can develop software for your computer by controlling access to the file. Software vendors with no access to the file will be at the mercy of pirates. They may even be locked out completely! Remember, the OS has to be unlocked too! If ICBM restricts access so as to prevent any KEPROM-based programming languages from being marketed to the public, then nobody can market software to the public in a form except KEPROM! This is what worries me most about the KEPROM since we are already seeing a trend in the direction of such "non-programmable" machines today. For instance, although the Macintosh, ST, and Amiga are all programmable, their icon-based user interfaces obviously aren't designed to appeal to programmers. They are meant to be bought by people who will run pre-programmed applications on them. Now you can begin to see why I believe that the KEPROM is really intended for copy protectionism rather than copy protection. It appears most ideally suited to "closed-architecture," non-programmable computers.

Is the industry actually going to head in this direction? Are we doomed to a future where computers, like today's game machines, only run purchased cartridges and cannot be programmed? My instincts say no. Every microcomputer manufacturer in the past who has attempted to corner the software market for their own machines has failed miserably. (Two obvious examples are the TI 99/4 and the Coleco Adam. Both were very good computers that died on the vine because

of TI's and Coleco's pig-headed ideas about "cl*i* architecture," etc.) And without such a guaranteed market, it's hard to imagine any manufacturer taking the trouble to help software people with their problems.

But it could happen. Software vendors could convince Congress to force it on the manufacturers, for instance, just as the recording industry is attempting to do with digital audio tape. Or a manufacturer might be able to pull it off on their own if they are big enough (e.g., Apple or IBM). The day they do is the day I'll probably give up computers as a hobby.

#### REVIEW: PERCOM UPGRADE ROM

by John Brandt

I just received an upgrade ROM for my Percom disk drive system. I ordered it COD from Computer Service Land just before Memorial Day, so it took just about 2 1/2 weeks to get it. It cost me \$24 (\$20 plus shipping and COD fees).

It's super easy to install. First, you unplug your Percom controller drive (the big one), then you take the cover off by removing the four Phillips screws (two on each side) holding it on. The controller board is mounted vertically on the right side. Locate the old ROM. (It's the only 28<sup>1</sup>/<sub>2</sub> chip on the board, and it probably bears a copyright notice.) Look for a semicircular notch on one end of the chip. On my board, the notch is on the top end. Carefully pry the old chip out with a small screwdriver and plug the new one in, making sure that the notch points the same way as the old one did. Replace the cover and plug everything back together and you're done.

The new chip makes the following improvements to your Percom's operation:

1. It allows SpartaDOS, SmartDOS, etc., to automatically set the density on all drives, rather than just drive 1.
2. It corrects a timing problem so your Percom won't go to sleep or foul up anymore when using Atariwriter, Chameleon, and several other programs.
3. Disks formatted with the new ROM will have all sectors filled with zeros rather than X'1A' or X'9249,' so you can use sector copiers that were designed to skip sectors filled with zeros.

When using double-sided drives, the new ROM formats the back side correctly. The old ROM formatted the back side backwards, which slowed down I/O to the back side considerably. It also doesn't truncate the last 3-4 sectors on the back side to 128 bytes like the old ROM did.

If you ever plan on trying to use double-sided drives, this upgrade is a must. (You should also read the "Percom drive info" article.) Even if you don't, it's still worthwhile. You can order upgrade ROMs from:

Computer Service Land, Inc.  
14506-B Lee Road  
Chantilly, VA 22021

or phone them at (703) 631-4950 (That's what I did).

If any of you are heavily into software hacking, you may want to purchase the source code listing for \$30. (Warning: it's in 6809 assembler, not 6502.) If you do, and you come up with an upgrade that Computer Service Land will use, they will pay you for it (up to \$100). Right now they are looking for code to make the Percom compatible with the 1050's "enhanced" density. They would probably also pay for other obvious upgrades, such as high-speed I/O like the US Doubler or support for other disk formats (a program to read/write IBM disks would be especially useful).

FIRST MEMBER TO BRING  
PUZZLE TO MEETING  
COMPLETED WITH CORRECT  
ANSWERS WILL RECEIVE A  
DOOR PRIZE !!!

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